

**REMARKS**

Reconsideration of the application in view of the above amendments and the following remarks is requested.

Claims 1-67 are now in this case. Claims 1, 14, 44, and 67 have been amended. Claims 68- 72 have been added.

The office action states that Claims 1-3, 11, 12, 14-21, 23-31, 41, 42, 44-50, 53-58, and 67 are rejected under Section 35 U.S.C. 103(a) as being unpatentable over Cabib et al , further in view of Lee et al and Bostick et al.

Regarding claim 42, Examiner has stated that weight coefficients for a particular training set selected to maximize specificity subject to the constraints of 100% sensitivity to melanoma is a theoretical concept and thus equivalent to Bostock's 92.4% sensitivity. Applicant states that the *criterion* of 100% sensitivity in the *training set* is not a theoretical concept. It is done routinely in present and past performance of the invention. Examiner has apparently confused the *predicted sensitivity* for an image *outside* of the training set with Bostock's numbers. Bostock can *never* have 100% sensitivity, since he has a neural network which "learns" as it goes along and may in the end with enough data approach high sensitivity, but can never in theory have 100% sensitivity for any training set. Bostock's neural network is thus fundamentally different from the present invention, and one of skill in the art would not think to require a sensitivity of 100% on the basis of Bostock's work. Applicant states that the fact that the 100% sensitivity criterion works at all was surprising to the inventors, as there should be no way in theory for normally distributed values to produce high specificity under such a criterion. Claim 42 is thus patentable over its parent claim.

Regarding claim 10, Examiner has introduced Tryggvason et al (U.S. 5,660,982) as prior art. Tryggvason et al deal solely with *in vitro* specimen, and thus is not applicable to the claims (as amended).

Claim 14 is an example of the amended independent claim that Applicant proposes in this draft, where the patentable limitation of claim 42 is moved into the independent claims. In addition, claims dependent on claim 14 that Examiner has allowed are rewritten as independent claims 68-72. Claims 1, 44, and 67 will be rewritten in the final draft to include the added section of claim 14.

An additional fee of \$ is required for 5 extra independent claims 3 extra total claims more. A check for this amount is attached. Any insufficiency or overage may be debited or credited to deposit account 08/2240 . A signed deposit account authorization is on file for this case.

On the basis of the above amendments and remarks, reconsideration of this application and its early allowance is requested.

Respectfully,

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